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Via Electronic Filing

November 20, 2019

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Secretary
Federal Communications Commission
445 Twelfth St., SW
Washington, DC 20554

Re: ***Wireless Telecommunications Bureau and Wireline Competition Bureau Seek Comment on WIA Petition for Rulemaking, WIA Petition for Declaratory Ruling and CTIA Petition for Declaratory Ruling***
WT Docket No. 19-250, WC Docket No. 17-84, RM-11849

Consumer Technology Association® ("CTA")®[1] applauds the continued efforts of the Federal Communications Commission ("Commission") to facilitate the availability and deployment of wireless communications services, a priority recognized by both Congress and the Commission. CTA submits this letter in response to the above-referenced public notice on petitions submitted by CTIA and the Wireless Infrastructure Association ("WIA") encouraging the Commission to take further action to streamline infrastructure requirements (the "Petitions").[2]

The consumer technology industry is rapidly developing connected technologies that will improve the customer experience and individuals' lives. For these innovations to reach their full potential, providers must be able to readily deploy wireless infrastructure to upgrade or expand capacity of existing wireless networks.

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[1] As North America's largest technology trade association, CTA® is the tech sector. Our members are the world's leading innovators—from startups to global brands—helping support more than 18 million American jobs. CTA owns and produces CES®—the largest, most influential tech event on the planet.

[2] *Wireless Telecommunications Bureau and Wireline Competition Bureau Seek Comment on WIA Petition for Rulemaking, WIA Petition for Declaratory Ruling and CTIA Petition for Declaratory Ruling*, Public Notice, DA 19-913 (rel. Sept. 13, 2019).

CTA's members deeply appreciate the Commission's many ongoing efforts to promote and facilitate deployment of broadband, particularly the fifth generation ("5G") wireless services that will offer consumers speeds 100 times faster and five times more responsive than today's networks.[3] Government actions at the local and state levels also are shaping the deployment and availability of 5G.[4] Despite regulatory reform by the Commission and certain states and localities, however, the Petitions demonstrate a continuing need for Commission action to improve and expedite the process for collocating or replacing transmission equipment to enable the deployment of new, innovative services.[5] Thus, streamlining infrastructure deployment should remain a top Commission priority. Specifically, the Commission should address the regulatory barriers at the local and state levels that are slowing the processes for collocating or replacing transmission equipment on existing wireless towers or base stations. Targeted steps to further clarify these procedures are necessary to ensure localities do not hinder 5G deployment by denying the streamlined treatment Congress intended for certain wireless facilities.

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[3] Gary Shapiro, *What 5G can do for DC*, Washington Examiner (Mar. 4, 2019), https://www.washingtonexaminer.com/opinion/op-eds/what-5g-can-do-for-dc ("Shapiro, *What 5G can do for DC*"); *see also* Ajit Pai, Chairman, Federal Communications Commission, Remarks at the National Spectrum Consortium 5G Collaboration Event, Arlington, VA, at 1 (Apr, 30, 2019) ("5G will be even more transformative than 4G. Networks will be 100 times faster. They will carry a lot more data…. 5G will power smart transportation networks that reduce traffic, prevent accidents, and limit pollution. 5G will enable healthcare professionals to remotely monitor your health and transmit data to your doctor before problems become emergencies. 5G will empower farms to apply precision agriculture. And, of course, 5G will unlock innovations that are yet to be imagined.").

[4] *See, e.g.*, Brendan Carr, Commissioner, Federal Communications Commission, "A Modern Regulatory Approach to 5G," Remarks at the Transatlantic Policy Dialogue, MWC-Barcelona, at 2 (Feb. 25, 2019) ("Although the benefits of 5G are compelling, the network upgrade won't happen evenly or everywhere unless we get the right regulatory structures in place…. We want to see next-generation broadband and the economic opportunity it enables available in every community. And smart infrastructure policies are key to doing that—they can flip the business case for thousands of communities.").

[5] *See generally* WIA Petition for Rulemaking to Accelerate Wireless Broadband Deployment by Amending the Rules Implementing Section 6409 of the Spectrum Act, RM-11849, at 12 (Aug. 27, 2019) ("WIA Petition for Rulemaking"); WIA Petition for Declaratory Ruling, Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79, at 10-11 (Aug. 27, 2019) ("WIA Petition for Declaratory Ruling"); CTIA Petition for Declaratory Ruling, Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79 & WC Docket No. 17-84, at 10-14, 16, 18, 22, 26 (Sept. 6, 2019) ("CTIA Petition for Declaratory Ruling").

The Commission's Recent Steps to Streamline Infrastructure Regulations Are Facilitating Growth

As CTA has noted, one of the "fundamental objectives of the Communications Act is to promote new and expanded communications services, and this includes removing regulatory barriers that slow or impede those services."[6] In the last few years, the Commission has taken important steps to streamline state and local review of infrastructure siting, as well as its regulatory underbrush with respect to the National Environmental Policy Act ("NEPA") and the National Historic Preservation Act ("NHPA").[7] These important orders have helped to address the "[i]nefficient and duplicative permitting processes [that] epitomize red tape" and the "high fees [that] also hinder deployment."[8] CTA also commends the Commission for issuing a Notice of Proposed Rulemaking on Over-the-Air Reception Devices ("OTARD") expansion to explore whether its OTARD statutory authority can be another tool in the Commission's toolbox to facilitate broadband and 5G services.[9] The Commission's actions have yielded measurable results. For example, "in late 2018, US mobile operators started deploying 5G upgrades," and will continue to do so through 2019 with deployments in the low-, mid-, *and* high-bands.[10]

Consumer Demand for 5G Innovation Continues to Grow

Consumer demand for connected devices, higher-speed applications, and more data-intensive services demonstrates the need for the Commission to continue to streamline and expedite processes to deploy wireless technologies.[11] Meeting these demands and narrowing the digital

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[6] Reply Comments of CTA, WT Docket No. 17-79, at 4 (July 17, 2017) ("CTA Reply Comments").

[7] *See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Third Report and Order, 33 FCC Rcd 9088 (2018) (addressing the issues of siting fees, aesthetic requirements, and timeliness of application review); *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Third Report and Order and Declaratory Ruling, 33 FCC Rcd 7705 (2018) (prohibiting state and local moratoria pursuant to Section 253(a) of the Communications Act of 1934); *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Second Report and Order, 33 FCC Rcd 3102 (2018) (streamlining NEPA and NHPA reviews).

[8] CTA Reply Comments at 4 (citation omitted).

[9] Reply Comments of CTA, WT Docket No. 19-71, at 1 (June 17, 2019).

[10] CTA, *5G Impact on Industries*, at 12 (2019), https://www.cta.tech/Research-Standards/Reports-Studies/Studies/2019/5G-Impact-on-Industries.aspx ("5G Impact on Industries").

[11] *See* WIA Petition for Rulemaking at 6; GSMA, *The 5G Era in the US*, at 30 (2018) https://www.gsmaintelligence.com/research/-?file=4cbbdb475f24b3c5f5a93a2796a4aa28-&download ("We forecast 5G adoption in the US to grow as fast as 4G adoption did.… By 2025,

divide will require rapid deployment of the cost-efficient and appropriately-sized infrastructure of next generation wireless networks and a regulatory framework that ensures applications to deploy this infrastructure is afforded expeditious review at the local and state level.

Further technological breakthroughs in artificial intelligence, augmented and virtual reality, IoT, robotics, blockchain, and edge computing will all either rely on, or be enhanced by, 5G connectivity. 5G connectivity will offer enhanced broadband capabilities and data-intensive applications that can be utilized by new formfactor devices and connected vehicles, low latency applications such as cloud robotics and edge computing, and massive IoT services in smart cities, agriculture, and manufacturing. "With 5G, virtually anything will be able to connect to and be powered by the Internet…smart roads and cities…greater access to healthcare services thanks to the growing field of digital health technologies. These innovations are right around the corner, as soon as we get the necessary infrastructure in place."[12]

In turn, 5G will allow for network slicing techniques that enable virtualized networks to provide different performance characteristics for different use cases.[13] Massive and industrial IoT scenarios will require millions of sensors and connected devices in venues, buildings, and cities, and to perform remote patient services and telehealth, robotics operations, and smart grid monitoring.[14]

LTE deployment ushered in the app ecosystem and "a technology era unlike any other in the past…chang[ing] the way we interact with information and people."[15] The higher throughputs and extremely low latency of 5G will allow innovators to create new digital solutions for both consumers and industry and is expected to bring "new tools and business models that shape the trajectory of the global economy."[16] For example, by 2022 new use cases in industries such as manufacturing and agriculture are expected to increase the average gigabit per month consumption by a factor of 100.[17]

5G will become the lead mobile network technology in the US…."); Cisco, *Visual Networking Index: Forecast and Trends, 2017-2022*, at 2 (Feb. 2019), https://www.cisco.com/c/en/us/-solutions/collateral/service-provider/visual-networking-index-vni/white-paper-c11-741490.pdf (predicting that mobile IP traffic will grow at a Compound Annual Growth Rate ("CAGR") of 46 percent between 2017 and 2022, with wireless and mobile devices accounting for 71 percent of total IP traffic by 2022).

[12] Shapiro, *What 5G can do for DC*.

[13] 5G Impact on Industries at 9.

[14] *Id.* at 6.

[15] CTA, *5G U.S. Market Impact*, at 2 (2018), https://www.cta.tech/Research-Standards/Reports-Studies/Studies/2018/5G-U-S-Market-Impact.aspx ("5G U.S. Market Impact").

[16] 5G Impact on Industries at 2.

[17] 5G U.S. Market Impact at 11.

The manufacturing industry, through 5G connectivity in factories, connected-machinery and devices, and remote operations is expected to create a 5G-enabled addressable market estimated to be $132 billion in 2030.[18] Smart manufacturing and industrial IoT applications will facilitate the deployment of billions of devices that rely on wireless networks and provide extremely detailed data in real time. A similar demand for real-time data analytics, forecasting, remote sensing that will generate more precise farm plans and crop yield mapping is expected to create an $11 billion market for 5G-enabled agriculture services in 2030.[19]

Overall, 5G technologies and industry digitalization is estimated to grow the addressable market by $113 billion by 2026, representing a seven percent potential revenue growth from current forecasts.[20] U.S. leadership in the race to 5G stands to grow our economy by three million jobs and over $500 billion.[21] Globally, 5G could have an economic impact of over $12 trillion and create 22 million jobs.[22]

The Commission Should Continue to Prioritize Targeted Action to Further Streamline 5G Deployment

The consumer demand for connected devices, higher-speed applications, and more data-intensive services discussed above demonstrates the need for continued Commission action to expedite deployment of wireless technologies.[23] Meeting these demands—and narrowing the digital divide—requires a regulatory framework that allows for rapid deployment of cost-efficient and appropriately-sized infrastructure, including expeditious review of applications at the local and state levels.[24] However, "[s]ome state and local regulators have been slow to adopt 5G because it requires investment in infrastructure … [even though] these systems are relatively non-invasive, and in many cases require the installation of small cells."[25] As CTA members continue to develop technologies to bring better, faster, and more reliable

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[18] Ericsson, *5G for business: a 2020 market compass*, at 6 (Oct. 2019), https://www.ericsson.com/assets/local/5g/the-5g-for-business-a-2030-compass-report-2019.pdf.

[19] *Id.* at 9.

[20] *Id.* at 2, 3 ("aggregation of relevant revenues [generated by 5G and digitalization] that, combined, constitute a maximum total addressable market").

[21] Shapiro, *What 5G can do for DC*.

[22] 5G U.S. Market Impact at 13.

[23] *See* WIA Petition for Rulemaking at 6.

[24] *Id.* at 12; WIA Petition for Declaratory Ruling at 10-11; CTIA Petition for Declaratory Ruling at 10-14, 16, 18, 22, 26.

[25] Jeffrey Hill, *CTA's Gary Shapiro: State, Local Governments Lagging on 5G Adoption*, Via Satellite (Sept. 23, 2019), https://www.satellitetoday.com/government-military/2019/09/23/ctas-gary-shapiro-state-local-governments-lagging-on-5g-adoption.

connectivity to Americans through smaller form factors, the Commission should ensure that local and state regulatory processes are aligned with modern infrastructure, including further clarifying which deployments are eligible or the processes and remedies under Section 6409(a).[26]

As the Commission previously has recognized, Section 6409(a) "warrants the imposition of certain requirements with regard to application processing, including a specific timeframe for State or local government review and a limitation on the documentation States and localities may require."[27] Ensuring that states and localities have accurately scaled the risks and impacts of 5G wireless technologies and that requests to collocate or replace transmission equipment on existing infrastructure are considered expeditiously will enable faster deployment and align with the Commission's findings on reducing barriers to wireless broadband access.[28] In turn, this will ensure wireless deployment keeps pace with the growing consumer demand for connected devices, higher-speed applications, and more data-intensive services of the coming 5G ecosystem.

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For the above reasons, CTA strongly supports Commission action to promote wireless deployment by ensuring state and local governments comply with statutory obligations under 6409(a).

Sincerely,

/s/ Michael Petricone
Michael Petricone
Sr. VP, Government and Regulatory Affairs

/s/ Jamie Susskind
Jamie Susskind
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[26] As the Commission rightly acknowledged, Section 6409(a) of the Spectrum Act of 2012 codified "Congress's goal of facilitating rapid deployment," and the Commission's implementing rules serve the public interest by providing guidance to all stakeholders.

[27] *Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies*, Report and Order, 29 FCC Rcd 12865, 12955 ¶ 212 (2014).

[28] *Id.* at 12868 ¶ 5 ("sharing wireless infrastructure—whether towers, other support structures, or transmission equipment—reduces costs and promotes access to such infrastructure, and thus may reduce a notable barrier to deployment").